

REMARKS/ARGUMENTS

Claims 1-39 were pending in the Application. By this amendment, claims 1, 9 and 29 are being amended, claim 4 is being cancelled, and new claims 40-42 are being added, to advance the prosecution of the application. No new matter is involved.

In Paragraph 2 which begins on page 2 of the Office Action, claims 1, 2, 5 and 6 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,945,972 of Okumura et al. In Paragraph 4 which begins at the bottom of page 3 of the Office Action, claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Okumura et al. in view of U.S. Patent 5,712,652 of Sato et al. In Paragraph 5 which begins on page 4 of the Office Action, claims 9, 20, 22, 28 and 34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Okumura et al. in view of EP 586155 of Yutaka et al. In Paragraph 5 which begins on page 5 of the Office Action, claims 4, 10-17, 21, 23-26, 29-32 and 35-38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Okumura et al. and Yutaka et al. in view of Sato et al. In Paragraph 6 which begins at the bottom of page 8 of the Office Action, claims 7, 8, 18, 19, 27, 33 and 39 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Okumura et al. and Yutaka et al. in view of EP 4144780 of Hamada. These rejections are respectfully traversed, particularly in view of the amendments being made to independent claims 1 and 9 and in view of the form of new claims 40-42 as set forth herein.

In the Okumura et al. '972 reference, the data stored in the memory is directly output. In the present invention, on the other hand, a signal selector is operated based on data stored in a storing circuit and selects an output signal from among two or more display signals. Consequently, in the case of the present invention, the stored data is not directly output. Similarly, in the Yutaka et al. '155

reference, an output of a memory is applied to the liquid crystal, and thus differs from the present invention as well.

Claims 1 and 9 are being amended in order to more clearly distinguish patentably over such references. As so amended, each claim recites "a signal selector which is operated based on data stored at said storing circuits for selecting an output signal from among two or more display signals and for supplying said selected signal to said display element". Accordingly, such claims and the various claims which depend therefrom are submitted to clearly distinguish patentably over the art.

The Sato '652 reference is combined with Okumura et al. in rejecting claim 3 and with Okumura et al. and Yutaka et al. in rejecting claims 4, 10-17, 21, 23-26, 29-32 and 35-38. Sato does not consider a structure in which the liquid crystal is driven by actively using only digital data stored in the memory for a long time. Consequently, such reference inherently differs from the present invention. Sato does not have a structure which can store analog data and display based on the stored analog data. Therefore, such reference clearly differs from, for example, claim 9 of the present application which includes such a structure.

Fig. 1 of Sato discloses a structure wherein, in each pixel, transfer gates 9 and 11 which correspond to a signal selector in the case of the present invention are connected respectively to an AC drive signal line 8 and a reset signal line 10 (to which a constant voltage which is identical to the voltage on the opposing electrode is applied) and, based on data stored in a digital memory 100 made of two inverters, one of the transfer gates 9 and 11 is operated so that an AC drive signal of the constant voltage can be output to the liquid crystal.

New claim 40 combines much of claim 1 as amended above with one data line and one TST. Accordingly, such claim is submitted to clearly distinguish patentably over the prior art including particularly Sato in attempted combination with the

other references. Moreover, Okumura fails to disclose a signal selector which is operated based on the digital signal stored at the storing circuit for selecting an output signal from among two or more display signals and for supplying the selected signal to the display element. In addition, the cited references, including Sato, fail to disclose capturing a one-bit digital image signal via a switching element connected to one drain line and operation of a signal selector based on the stored data.

Similar comments apply to new independent claim 41 which combines claim 1 as amended above with dependent claim 4. Such structure is shown in Fig. 4 of the Application. Claim 4 is being cancelled in view of new independent claim 41. None of the citations disclose or suggest a structure as defined in new claim 41, which structure allows for the advantage that the storage capability can be improved by storing a digital image signal using an inverter and a capacitor.

New independent claim 42 combines original claim 1 with a digital image signal of two bits or more. With respect to such combination, Sato fails to disclose or suggest a structure in which a signal having a size of two or more bits is stored and a signal is selected corresponding to this number. In addition, in Okumura and Yutaka, as well as the other references, because the output of the memory is applied to the liquid crystal, when the digital data comprises a plurality of bits, it is not possible to output different voltage signals corresponding to different numbers of bits. Therefore, this difference between the present invention and the citations is clear.

In conclusion, claims 1-3 and 5-42 are submitted to clearly distinguish patentably over the prior art for the reasons discussed above. Therefore, reconsideration and allowance are respectfully requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los

Appl. No. 09/747,194
Amdt. Dated September 22, 2003
Reply to Office Action of March 20, 2003

Attorney Docket No. 81784.0224
Customer No. 26021

Angeles, California telephone number (213) 337-6846 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

Date: September 22, 2003

By: 

John P. Scherlacher
Registration No. 23,009
Attorney for Applicant(s)

500 South Grand Avenue, Suite 1900
Los Angeles, California 90071
Phone: 213-337-6700
Fax: 213-337-6701